

Claims:

1. Process for the polymerisation or copolymerisation in the gas phase of olefin(s) by bringing the said olefin(s) into contact, under polymerization or copolymerisation conditions in a reactor in which the polymer or the copolymer is maintained in a fluidized bed and/or agitated with mechanical stirring, with a catalyst system, which
5 process comprises a pre start-up operation characterized in that, prior to the introduction of the catalytic system in the reactor, the reactor is subjected to a cleaning treatment comprising the steps of introducing into the reactor an alkane having from 4 to 8 carbon atoms, circulating said alkane across the reactor under pressure and elevated temperature, depressurizing and purging the reactor.
- 10 2. Process according to claim 1 wherein the reactor contains a charge powder and wherein said cleaning treatment is performed before, after or during the introduction of the charge powder into the reactor.
3. Process according to claim 2 wherein said cleaning treatment is performed before introduction of the charge powder into the reactor.
- 15 4. Process according to any of the preceding claims wherein the introduction of the alkane is performed in the presence of an inert gas, e.g. nitrogen.
5. Process according to any of the preceding claims wherein the cleaning treatment is performed under airtight conditions, in the absence of reacting gas like the olefins.
6. Process according to any of the preceding claims wherein the cleaning treatment
20 comprises circulating the alkane across the reactor under a pressure above the atmospheric pressure, preferably comprised between 5 and 30 bars.
7. Process according to any of the preceding claims wherein the cleaning treatment comprises circulating the alkane across the reactor at a temperature of at least 40°C,

preferably at a temperature comprised between 50 and 120°C.

8. Process according to any of the preceding claims wherein the alkane is chosen amongst one or more of butane, pentane, hexane, heptane or octane.

9. Process according to claim 8 wherein pentane is used as the alkane.

5 10. Process according to any of the preceding claims wherein the quantity of alkane used for the treatment is such that the alkane partial pressure is comprised between 25 and 95% of the saturated vapor pressure of the said alkane under the temperature and pressure treatment conditions.

11. Process according to claim 10 wherein the quantity of alkane used for the
10 treatment is such that the alkane partial pressure is comprised between 45 and 75% of the saturated vapor pressure of the said alkane under the treatment conditions.

12. Process according to any of the preceding claims wherein the treatment last at least five minutes and preferably over 15 minutes.

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